

Office Action Summary	Application No. 10/721,898	Applicant(s) CONRAD ET AL. <i>off</i>	
	Examiner Shew-Fen Lin	Art Unit 2166	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 05 July 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,2,4-6 and 8-10 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,2,4-6 and 8-10 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>7/5/07</u> | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

- a. This action is taken to response to amendments and remarks filed on 7/5/2007.
- b. Claims 1-2, 4-6, and 8-10 are pending and claim 10 has been added. Claims 1, 5, 9, and 10 are independent claims.

Withdrawal of Rejections/Objections

In view of the amendments, submitted on 7/5/2007, Examiner hereby withdraws the rejection/objections that were given in the previous Office Action.

Double Patenting

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

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Claims 1, 2, 5, 6, 9, and 10 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1, 24, and 56 of copending Application No. **10/721,348**.

The following table shows the claims in Instant Application that are rejected by corresponding claim(s) in **10/721,348**.

Instant Application	Application 10/721,348
1. A method of replicating data objects from a source system to a target system, comprising:	1. A method for replicating one or more data objects from a source system to a target system, the method comprising:
creating an electronic data element comprising a first field having an identifier and a second field having a state of the identifier, wherein the state of the identifier is set to one of the following states:	providing an electronic data element comprising a first data field and a second data field, wherein the first data field contains data representing an identifier assignable to the one or more data objects and the second data field contains data representing a state of the identifier, the second data field configured to store one of:
<p>a) a first state, in which said electronic data element is accessible by one or more data object processing operations and whereby said identifier is assignable to one or more data objects stored in a memory,</p> <p>b) a second state, in which said electronic data element is not accessible by one or more data object processing operations and whereby said identifier is assignable to one or more data objects stored in a memory, and</p> <p>c) a third state, in which said electronic data is not accessible by one or more data object processing operations and whereby said identifier is not assignable to one or more data objects stored in a memory;</p> <p>setting the state of the identifier to the first state;</p>	<p>a) a first state, in which said electronic data element may be accessed by one or more data object processing operations and whereby said identifier is assignable to one or more data objects,</p> <p>b) a second state, in which said electronic data element may not be accessed by one or more data object processing operations and whereby said identifier is assignable to one or more data objects by one or more data object processing operations having already accessed said identifier at a time when said identifier was in the first state, or</p> <p>c) a third state, in which said electronic data element may not be accessed by one or more data object processing operations and whereby said identifier is not assignable to one or more data objects;</p>

Instant Application	Application 10/721,348
assigning, after setting the state of the identifier to the first state, the identifier to one or more data objects stored in a memory of the source system;	assigning the identifier to the one or more data objects;
processing, by one or more data object processing operations, the one or more assigned data objects while the identifier is set to the first state;	processing the one or more data objects in accordance with a software application;
	storing the one or more processed data objects on the source system;
changing the state of the identifier from the first state to the second state while at least some of the one or more assigned data objects are being processed by the one or more data object processing operations; changing the state of the identifier to the third state when the one or more assigned data objects are finished being processed by the one or more data object processing operations; and assigning a state to the identifier; and	changing the state of the identifier in the electronic data element to indicate that the one or more processed data objects are ready to be replicated from the source system to the target system; and
replicating, after changing the state of the identifier to the third state, the one or more assigned data objects from a-the memory in the source system to a memory in the target system.	replicating, in response to changing the state of the identifier, the one or more processed data objects from the source system to the target system.
2. The method of claim 1, further comprising storing the one or more assigned data objects prior to replicating the one or more assigned data objects.	

Claims 5, 6, 9, and 10 have the similar mappings to claims 24 and 56 of copending Application 10/721,348 as shown above.

Although the conflicting claims are not identical, they are not patentably distinct from each other because they are substantially similar in scope and they use the same limitations.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1, 5, 9-10 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claim 1, the phrase "one or more data object processing operations", renders the claim indefinite because it is unclear which "one or more data object processing operations" can access the electronic data element. Similar problems exist in claims 5, 9, and 10

Claim Rejections – 35 USC § 101

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claim 10 is rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

Claim 10 is directed towards a computer readable medium or a propagated signal. As such, the claim is drawn to a form of energy. Forms of energy do not fall within a statutory category since they are clearly not a series of steps or acts to constitute a machine, not a tangible

physical article or object which is some form of matter to be a product and constitute a manufacture, and not a composition of two or more substances to constitute a composition of matter.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-2, 4-6, and 8-10 are rejected under 35 U.S.C. 102(e) as being anticipated by Jamil et al. (US Patent Application Publication US 2003/0233523, hereinafter “Jamil”).

As to claims 1, 5, and 9-10, Jamil discloses a system with methods /means / system of replicating data objects from a source system to a target system [figure 6 shows copying data object 646 from a source system (processor 604) to a target system (processor 608); But if processor 202 has modified data portion 218, then a data request should be sent from shared storage 290, to private storage 220 for an updated copy of data portion 218, with which to satisfy the data request of processor 201 (paragraph 0034)], comprising:

creating an electronic data element [figure 4, 490; figure 7, 790; figure 9a~9d, 990 all show the data element comprising Data, Status and P fields], comprising a first field having an

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identifier [figure 4, 490; figure 7, 790; figure 9a~9d, 990 all show the data element comprising Data, Status and P fields; the Data field is the corresponding identifier field] and a second field having a state of the identifier [figure 4, 490; figure 7, 790; figure 9a~9d, 990 all show the data element comprising Data, Status and P fields; the Status field is the corresponding state of the identifier], wherein the state of the identifier is set to one of the following states:

a) a first state [the shared state, S], in which said electronic data element is assignable by one or more data object processing operations [according to the M (modified), E (exclusives), S (shared) and I (invalid) protocol for maintaining coherency (paragraph 0032)] and whereby said identifier is assignable to one or more data objects [figure 4, 490; figure 7, 790; figure 9a~9d, 990 show the assignment],

b) a second state [the exclusive dirty (ED) state], in which said electronic data element is not assignable by one or more data object processing operations [paragraphs 0035-0040] and whereby said identifier is assignable to one or more data objects [figure 4, 490; figure 7, 790; figure 9a~9d, 990 show the assignment], and

c) a third state [the modified (M) state], in which said electronic data element is not assignable by one or more data object processing operations [paragraphs 0035-0040] and whereby said identifier is not assignable to one or more data objects [figure 4, 490; figure 7, 790; figure 9a~9d, 990 show the assignment];

setting the state of the identifier to the first state [if no data portion copies reside in a private storage other than the requesting private storage. It may be assigned a new status of S according to transition 335 (paragraph 0038)];

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assigning, after setting the state of the identifier to the first state, the identifier to one or more data objects stored in a memory of the source system [figure 4, 490; figure 7, 790; figure 9a~9d, 990 show the assignment];

processing, by one or more data object processing operations, the one or more assigned data objects while the identifier is set to the first state [paragraph 0038, process data in private storage for status of S, i.e. first state];

changing the state of the identifier from the first state to the second state while at least some of the one or more assigned data objects are being processed by the one or more data object processing operations state [figure 4, 490; figure 7, 790; figure 9a~9d, 990 show the assignment, paragraph 0027-0028];

changing the state of the identifier to the third state when the one or more assigned data objects are finished being processed by the one or more data object processing operations [modified copy 646 is received by shared storage 690, data portion 697 is updated and reassigned a status of M (paragraph 0054)]; and

replicating, after changing the state of the identifier to the third state, the one or more assigned data objects from a-the memory in the source system to a memory in the target system [figure 6 shows that, when the status changes from ED to M, data object 646 is copied from a source system (processor 604) to a target system (processor 608); But if processor 202 has modified data portion 218, then a data request should be sent from shared storage 290, to private storage 220 for an updated copy of data portion 218, with which to satisfy the data request of processor 201 (paragraph 0034)].

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As to **claims 2 and 6**, Jamil discloses comprising storing the one or more assigned data objects prior to replicating the one or more assigned data objects [modified copy 646 is received by shared storage 690, data portion 697 is updated and reassigned a status of M (paragraph 0054)].

As to **claims 4 and 8**, Jamil discloses comprising, upon a commit of the storing of the one or more data objects, the state of the second field of the electronic data element is set to the third state [modified copy 646 is received by shared storage 690, data portion 697 is updated and reassigned a status of M (the modified state, i.e. third state, (paragraph 0054)]

Response to Remarks

Applicant's arguments based on newly amended features with respect to claims 1, 5 and 9 have been fully and carefully considered but are moot in view of the new ground(s) of rejection. Refer to the corresponding sections of the claim analysis for details.

Conclusion

Applicant's amendment necessitated the new grounds of rejection presented in this Office Action. Accordingly, **THIS ACTION IS MADE FINAL**. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after

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the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Shew-Fen Lin whose telephone number is 571-272-2672. The examiner can normally be reached on 8:30AM - 5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hosain Alam can be reached on 571-272-3978. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-9600.

September 10, 2007

Shew-Fen Lin
Patent Examiner
Art Unit 2166



HOSAIN ALAM
SUPERVISORY PATENT EXAMINER